SEQUENCE LISTING

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Maher, Kaija
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Pallansch, Mark A.

<120> TYPING OF HUMAN NON-POLIO ENTEROVIRUSES

<130> 14114.0353U2

<140> 09/937,862
<141> 2001-09-28

<150> PCT/US00/07828
<151> 2000-03-24

<150> 60/127,464
<151> 1999-03-31

<160> 89

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence; Note =
synthetic construct

<400> 1
gcrtgcaatg ayttctcwgt   20

<210> 2
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
synthetic construct

<221> misc_feature
<222> (1)...(18)
<223> n = a, t, c or g

<400> 2
ngcnccdgat tgntgscc   18

<210> 3
<211> 20
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

<400> 3
gcnccngayt gntgnccraa   20

<210> 4
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

<400> 4
atgtaygtnc cnccnggngg   20

<210> 5
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

<400> 5
ggngcrttnc cytcngtcca   20

<210> 6
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

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<400> 6
acrtgncnng tytgcatngt                                                    20

<210> 7
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<221> misc_feature
<222> (1)...(18)
<223> n = a, t, c or g

<400> 7
awnttytayg ayggntgg                                                      18

<210> 8
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

<400> 8
tananngtnc ccatrttrtt                                                    20

<210> 9
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

<400> 9
atgtayrtnc cnmcnggngc                                                    20

<210> 10
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

<400> 10
ggnggnggrt cngtnakytt   20

<210> 11
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

<400> 11
gangaraayc tnatngarac   20

<210> 12
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> misc_feature
<222> (1)...(19)
<223> n = a, t, c or g

<400> 12
cccatnakrt cnatrtccc   19

<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

<400> 13
gtrctyacna nnagrtcyct   20

4

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<210> 14
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<221> misc_feature
<222> (1)...(19)
<223> n = a, t, c or g

<400> 14
tsaarytgtg caargacac                                               19

<210> 15
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<221> misc_feature

<222> (1)...(18)
<223> n = a, t, c or g

<400> 15
stgyccagat ttcagtgt                                                18

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

<400> 16
ggnacncayr tnathtggga                                              20

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct
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<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

<400> 17
gccntrttnt grtgnccraa                                          20

<210> 18
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

<400> 18
ggnacncayr tnrtntggga                                          20

<210> 19
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

<400> 19
acngcngyng aracnggnca                                          20

<210> 20
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> misc_feature
<222> (1)...(19)
<223> n = a, t, c or g

<400> 20
acngcngtng aracnggng                                           19
```

```
<210> 21
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<221> misc_feature
<222> (1)...(20)
<223> n = a, t, c or g

<400> 21
cargcngcng aracnggngc                                                    20

<210> 22
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<221> misc_feature
<222> (1)...(19)
<223> n = a, t, c or g

<400> 22
cnccnggngg nayrwacat                                                     19

<210> 23

<211> 888
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 23
ggattgggcg attctattga ggctgccatt gacagcatca cacaaaatgc actaaccact       60
gtacaaaata caacacaatc aggacctact cattcaaaag aagttccagc attaacagca      120
gtggaaacag gtgctactag tcaagtagaa ccaggtgact tgattgaaac cagacatgtt      180
ataaacatga dacaaagatc tgaagcatct atcgaatctt tctttggccg atccgcatgt      240
gttgcgatac ttggtttgtc aaacgccaaa ccaactgaca caaacaccaa acaattgttc      300
aaaacatgga gaatatcata tttagaaact caccaactca gaagaaaact tgagttcttt      360
acgtactcaa ggtttgattt ggaaatgacc atagtaatta cagagagggt tttcaatgca      420
gtcaatgtcc cattgcgcaa ttatgtgtac caaataatgt acgttccccc aggtgctcca      480
gaaccacaat catgggatga ttacacgtgg caatcttcta ccaacccatc aatattctac      540
accactggaa atgctcctcc cagagtgtca attccatttg ttggaatagg gtctgcatat      600
tcacactttt atgatggttt ctcacagatt cctcttgact caatcagtgc tggagcaagt      660
aataagtatg gttacacttc aatcaatgac tttggtaccc tggcaattag aatagtaaat      720
gaatatgacc cagtgcaagt ggatgcaaag gcccgagtgt atattaaacc caaacatgtt      780
cgcatgtggt gccccagacc accacgggcc atgccttaca agaatagcac agtggatttc      840
gacccatcag caactgtaat gacccaagtc gcagacatca ggacgtat                   888
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7

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<210> 24
<211> 882
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 24
ggagatccag tggaagactt aatcgccaat acagttgcta ggactctaga gagaataacc        60
tctccaactc ataatacaac ggcaggcaac accaccgtta gcgagcacag catcggtacc       120
ggttcagtgc ctgcgttgca agctgctgag actggggctt cgtctaacac cacagatgag       180
agtatgatag aaacacggtg tgttgtcaat aggaatggag tgattgagac tagcatcaac       240
catttcttct cccgagcggg gcttgtggga gtgctgaaca tacttgatgg aggcacctca       300
aaaggctttg aagtttggga tatagacatc atgggctttg ttcagcttcg cagaaagcta       360
gagatgttca cctacatgcg gttcaacgct gaattcacct ttgtcgcgac tttgagtgac       420
ggaacaactc cccatataat gttgcaatac atgtatgtgc cccctggagc tcccaaacct       480
caggaaagag attcattcca atggcagact gcaaccaacc catccgtgtt tgcgaaaatg       540
agtgaccctc ctccgcaagt ttcagtacct ttcatgtctc ctgctagcgc ctaccagtgg       600
ttttatgatg ggtacccaac atttgatgat agaccacaga cctctaatcg tccctacgga       660
caatgcccca ataacatgtt gggcacattc gcggtgcgca ttgttagcaa gacgcctgcg       720
gagagagact tgcgcgtccg tgtttacatg aaactgaagc atgtgcgagc atgggtaccg       780
cgacccataa ggtcacagcc ttacgtcttg aagaactacc ccaactatga tggaacccaa       840
atcgtgccca gtgccaaaga tcgagaagac ataaagaaca ca                         882

<210> 25
<211> 915
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 25
ggtgatgcaa tcgctgatgc tatacaaaac acagttacat ctactataca gagagtcaca        60
accaacactg ttgggcaaga tgcaacagct gctaacacag cacccagctc tcatagtttg       120
aacactggcc tagtccccgc gcttcaagct gctgagacag gagcttcatc cacagccacg       180
gatgggaatt tgattgagac tagatgtgtt gtaaactcca atggtacacg tgaaacccac       240
attgagcatt tcttctctag gtcagggctg gtgggagtta tggaggtaga tgatacgggt       300
actagtggca agggattctc aaactgggac attgacatca tggcgtttgt gcaactgcgc       360
cgtaaactcg aggcatttac atatatgcgg ttcgacgcag agtttacctt tgtcaccaat       420
ttggagaacg ggctcacgaa taatagtgtg atacagtaca tgtatgtacc acctggagcg       480
cctaaacccg atgcccggga atcattccag tggcaaactg caaccaatcc gtcagtcttt       540
caaaaaatgg acagtccgcc acctcaagtt tcagtaccct tcatgtcacc agccagtgcc       600
tatcaatggt tctatgacgg ttaccccacc tttgggcccc actcggagac atctaatcta       660
tcttacgggc aatgtcccaa taatatgctg ggaacattct cggccaggt tgttagcaag       720
caaatcacca atcagaaatt ccagatccgt atttatctac ggctgaagag ggtgagggcg       780
tggatcccca gacctttgag atcgcagccg tacatttaca gaaactaccc cacctatggt       840
actaccatcc aatacctggc caaagatagg cgcaagatca ctgaaactga ttataatgct       900
gaacagcgca cgcat                                                        915

<210> 26
<211> 885
<212> DNA
<213> Artificial Sequence
```

8

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<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 26
ggcagaccaa ttgcagatat aatagaagga gcagtagctc aaactaccac cagagcacta      60
agtggaccaa ttcagccagt gacagcggcc aacacctctc ccagttcaca tcggcttggt     120
acggggcaag tgccagcttt gcaagcagca gaaacgggag ccacctcgaa tgcgaccgac     180
gagagtttga ttgaaaccag gtgtgtggtc aacagacatg gagtcatgga aactagcatt     240
gaacacttct tttcacgctc aggcttggca ggaattttga taattgagga ctccggtact     300
tccacgaaag gctacgccac ttgggaaatc gatgttatgg gatttgtcca gctgaggcgt     360
aaactagaga tgttcacata catgcgattt gatgcagagt tcacctttat cacagcagaa     420
aggaatggca acaccagccc aatacccatc cagtacatgt atgtcccacc cggagcccca     480
gtccctactg gtagggagac attccaatgg caaacagcga ccaatccatc cgtgatctca     540
aagatgactg atccaccagc ccaggtgtct gtaccattta tgagcccagc cagtacttat     600
caatggttct acgatggcta ccccacgttc ggagaagttc cagtgactac gaacttgaac     660
tatggacagt gcccaaacaa caaaatgggc actttctgca tccgcatggt ctcaggtgta     720
tctacaggca aggacgtcac tgtgcgcatt ttcatgaagt tgaagcatgt gcgcgcctgg     780
gtgccaaggc ccatcaggag ccagccttac ttgttaaaga attatcccaa ctttgacaag     840
tcaaatattg tagacgcatc atcgaacagg acatatacca ccact                     885


<210> 27
<211> 915
<212> DNA
<213> Artificial Sequence


<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 27
aatgaccccca tttcaaatgc aatagaaaat gctgtgagca cactcgctga caccacgata     60
tcacgtgtta cagcggccaa cactgctgct agctcccatt cccttggtac tggacgcgtg    120
ccggcgttgc aggctgcgga gacaggggca agttccaacg ctagcgatga gaacctgatt    180
gaaactcgtt gtgtgatgaa tagaaatgga gttaacgaag caagtgtaga acacttctac    240
tcccgtgcag ggctagtagg agttgtggag gtgaaagact caggcactag tcaggacggg    300
tacacggtgt ggcccataga tgtgatgggc tttgtgcaac agcggcgcaa gttagagcta    360
tctacttaca tgcgctttga cgctgaattt acctttgtgt ccaatctcaa tgacagcaca    420
acacccggca tgctattgca gtacatgtac gtgccgccgg gtgcgcccaa accagacggt    480
aggaagtcat atcaatggca aacagccacc aacccttcaa tattcgcaaa gttgagtgac    540
ccaccgcccc aagtgtctgt cccattcatg tcaccggcgt cagcctacca gtggttctac    600
gatggttacc ccacgtttgg cgaacacaag caagctacta atttacaata cggtcagtgc    660
cctaacaaca tgatggggca ttttgctatt cggacagtta gtgaatccac caccgggaaa    720
aatgtccatg tccgggtgta catgagaatt aagcacgtaa gagcatgggt gcccagacct    780
ttcagatccc aagcttacat ggtcaaaaac tacccgacat acagccaaac aatatccaat    840
actgcagccg atcgtgcgag cataaccact acggactatg agggtggcgt accagcaaac    900
ccgcagagaa ctttt                                                      915


<210> 28
<211> 888
<212> DNA
<213> Artificial Sequence


<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 28
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ggagacgaaa tactcgacct aatcgagagt gctgtacaga ataccactaa agccattacc      60
agctcaatcg acaccaaaac tggtgctaac actcaagcta gccaacatcg tataggcttg     120
ggggaggttc ccgctcttca agctgctgag acaggatcgt cttcgctcgt ttcggacaag     180
aacatgatag aaacaaggtg tgtcgtaaac aaacacagca cagaggaaac cagcattaca     240
aacttctact ccagggcggg cctagtgggg gttgtgaaca tgccagtaca aggaaccagc     300
aacacaaagg gtttcgcaaa gtgggggata gatataatgg gctttgtgca gatgaggcgc     360
aaacttgagc tcatgacata catgagattc tccgccgagt ttacgttcgt acccagcact     420
cctgggggag agactactaa ccttatactg caatacatgt atgcacctcc cggagctccg     480
ctgccaacca ggcgggattc atacgaatgg caaacatcca ctaacccctc tattatcagc     540
aagatggcgg acccacccgc tcaggtatcg gttccattcc tttctcctgc atcagcatat     600
cagtggttct atgatggcta ccccacattt gggaaacacc caatagatca ggacttccaa     660
tatggcatgt gcccaaacaa catgatgggc acattctgtg tgcgcatgat cggtgggggc     720
aaaccgaccc aatcagttac catacgtata tacatgagat taaagcatat ccgtgcatgg     780
gtgccccggc cactgaggag tcagaattac actatgagga attacccgaa ctacaacggg     840
ggcgcaataa aatgtacatc aaaaagcaga gctaccataa caaccttta                 888
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<210> 29
<211> 882
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 29
ggagattcca ttgaagacat aataagcaac actgtcaccc gtacactgca acaaatcagt      60
gccccatcac acgacactac agcagccaac acctcagtga gtaatcataa aattggtacg     120
ggggatgtcc cagctctcca agctgcagag actggcgcta cttccaatgc ctcagacgag     180
aacatgattg agacacgatg tgtgttaaat cgcaatgggg ttgtggaaac tagtttggac     240
catttctttt caagagcagg ccttgtggga gtgatcaatg tgcaagatgg cggcactcag     300
aagggttttg aagtgtggga catagatgtc atggggtttg ttcaactcag gaggaagttg     360
gagatgttca cgtacatgag gttcaacgcc gagttcacat tcgtatccac actcgcggat     420
ggcacaactc ccagagtgat gttgcagtac atgtacgttc cacctggtgc ccccaaacct     480
caggagagag attcgtttca gtggcaaact gcaaccaacc catcagtatt ttgcaaaatg     540
agtgaccctc ctccacaggt ttccgttcct ttcatgtcac cagctagtgc ctaccaatgg     600
ttctacgatg ggtacccaac attcgatgat cgaccggcca cctcaaacca cccgtacggt     660
cagtgcccca ataacatgat gggcacattc gcagtgcggt ttgtcagcaa gacccccagcc     720
acacgggatc tgcgtgtcag agtgtacatg cgcctgaaac acgtgcgcgc atgggtaccg     780
agacctatcc gatctcaacc ctatattttg aaaaactacc caaattatga tggcacaaag     840
ataacgtcga catctaagga taggcaaagc atcaaaacaa ca                        882
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<210> 30
<211> 894
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 30
ggcgacccccg tggaggacat catccacgac gctttgagca gcactgtgcg gcgggccata      60
actagtggtc aagatgtcaa cacagcggcc ggtaccgctc ctagctctca caggttggag     120
actggtcgtg ttcccgccct acaagcagca gaaactggag ccacttctaa cgctacagat     180
gagaacatga tagaaacgcg gtgtgtcatg aacagaaatg gagtgttgga ggcgactata     240
agtcatttct tctcacgctc aggtttggtg ggtgttgtca atctaactga cggaggcacc     300
gatacaacgg gatatgcagt gtgggacatt gacatcatgg gtttgtgca actgcggcgg     360
aaatgtgaga tgttcacata catgagattc aacgctgagt tcacattcgt cactacaaca     420
```

```
gaaaatggcg aggcaaggcc atttatgtta cagtatatgt atgtacctcc aggtgcccct    480
aagccaacgg gtagagatgc ttttcagtgg caaacagcga caaatccatc cgttttcgtt    540
aagctcacag atccacctgc tcaggtatca gtccccttca tgtcacctgc tagtgcctac    600
caatggttct atgacgggta tccaacattt ggacaacacc cggaaacatc taatacaaca    660
tatggacagt gccctaacaa catgatgggg acctttgctg tgagagtagt gagtagagtg    720
gctagccagc tcaaactaca gacacgagtg tatatgaagc ttaagcatgt gagagcatgg    780
atccctaggc caataagatc ccagccttac ctcctaaaga attttccaaa ttatgatagt    840
agtaagatca catacagcgc aagagatcgt gccagcataa aacaagctaa tatg          894
```

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<210> 31
<211> 912
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 31
gggccaatag aagaaatcat ctcaactgtt gccagtaacg cgttggcgct cagtcaaccc     60
aagccagtgg acaactctgt acaaaacacc caacaaagtg ctccagtgca tagccaggag    120
gtgccagcat tgaccgcagt ggagacaggg gcgacaagtg atgtggttcc atctgaccta    180
attcagacta gacacgtatt gaatgttaaa tccaggtctg aatccaccat cgagtcattt    240
tttgcaagag ctgcatgtgt aaccattatg caggtggaca atttcaacgc aacctctgtg    300
gaagacaaaa gaaagttgtt tgctaaatgg gcaatcacct acactgatac cgtccagctg    360
agacggaaat tagagttttt cacttattct agatttgact tagagatgac ttttgtgcta    420
actgagagat actactccca aagctcaggg catgctagat ctcaggtgta ccaaattatg    480
tatgttccac caggggcacc cacgcctagt gcatgggacg actacacatg gcaaacatcc    540
tccaacccat ccattttctt taccaccggc aatgcaccac cgcgcatttc aattccattt    600
gttggaatcg ccaatgcata ctcacacttt tatgatggct ttagtagagt acctttggag    660
ggagaaacaa cagacacagg agacgcttac tacgggctca cttcaataaa cgattttggt    720
acacttgcag tcagggtagt taatgactac aacccagcca gggtggagac aaggattaga    780
gtatacatga gcccaaaca tgtgagagtc tggtgcccgc gacctccaag agcggtaagc    840
tacagaggac ctggagtcga cctcctatca acatcagtaa cacctttatc caaacatgac    900
ctagcgacat ac                                                        912
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```
<210> 32
<211> 888
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 32
ggagatacag tgagtgatat gatcgaaaat tccatcaacc gaattaccag tgcaatttcc     60
actacccaga cacaccagac agcagctgac actagagtta gtacacacag gttaggcacg    120
ggggaggtgc cacctttaca agcagcagag acaggtgcca cctccaacgc aaccgacgag    180
aacatgattg aaacacgctg tgtcgtcaac aggcacgggg tgagcgagac cagcgtggaa    240
tacttcttct ctcgctctgg tttggcagga atagtcatcg tggaggatgc aactgccact    300
aataagggtt atgccacatg ggagattgat gtcatggggt tcgcgcaact gcgtcgcaag    360
ctggagatct tcacatacat gcgcttcgat gcagagttca cttttgtggc aacagaacgc    420
aatgggagca ccagcccggt catgatgcag tacatgttcg tgcccctgg cgccctgtt     480
ccaacaggga gagataccctt ccaatggcaa tctgctacta acccttcagt gctagtaaaa    540
atgacggatc caccggccca agttgccatc ccctttatgt ctccagctag tgcataccaa    600
tggttctatg atggatatcc tacctttgga gaaagaccag ttacaaccaa catgaattat    660
ggacagtgtc ccaacaacaa aatgggaact ttttgtatac gcactgtctc cggtgaagcg    720
tcagggaaaa acatcactat acgtattttt atgaggttga agcatgtaag agcgtgggtg    780
```

```
cctcgcccaa ttagaagcca gctatatctg cttaaaaatt accccaactt tgataacact      840
aagatcctca acgcctccca caacagagct tctatcacat caaacaca                   888
```

<210> 33
<211> 927
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 33
```
gggttggaag atctaataca acaagttgcg tctaacgcat tacaattgtc ccagccaaca      60
agaccggcac tcccaccagc cgagcagagt gtccccaaca ctaaccaaac aactccagaa     120
cactccaagg aagtcccagc gttaacggca gttgaaactg gcgccacgaa tcctctagag     180
cctggcgaca cagttcagac tagacatgtg atacaaacta gaagtagaag tgaaagtaca     240
gtggagtctt tctttgcgcg aggtgcatgt gtaaccatta tgggagtgga caactataat     300
gagacattga aaggagacca gaagtctact ctatttacaa cctggaacat cacctacact     360
gacacagtcc agctacggag aaaactggaa atgttcactt actccaggtt tgacatcgag     420
tttactttg tggtgactga acgctactac tcatcaaaca gtgggcatgc tctgaaccaa      480
gtgtaccaaa ttatgtatgt accacctgga gcaccagtgc caaagaaatg ggatgattac     540
acctggcaaa cctcttcaaa cccgtccata ttctacactt atgggtcagc accacccagg     600
atatccatac cctttgtggg tatagcaaac gcttactccc acttctatga tgggtatgcg     660
acagtgccct tgaaaactga caccacagac tcaggagcag cctactatgg agcagtatcc     720
ataaacgact tcggactgct tgcagttcgc gtcgtcaatg aacataatcc agtcagagta     780
tcatccaaaa ttagagtgta tatgaaacca aaacatgtca gggtatggtg tcccagacct     840
ccaagggctg tagagtatta tggaccagga gtggactaca aggcaaacac tttaacaccg     900
ttgccaataa agaatttgac tacttat                                          927
```

<210> 34
<211> 888
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 34
```
ggtgacaaag tggcagacat gattgagacc gcagtggaga agaccgtgtc ctcactaact      60
tcccctattc aaaccccac agccgccaac acaaacgtga gtaatcatcg aattgagctg      120
ggggaagtcc cggctttgca agctgctgaa accggcgcga cgtctcttgt gtctgatgaa     180
tacttgatag agactcgttg tgtagtgaat agccatagta cagaggaaac tacagtgggg     240
cacttctttt caagagcggg gttggtggga gtgattgacc tcccattaca gggaacagtc     300
aacacaggag gattcgcctc gtgggatatt gatgtaatgg gatatgttca gatgagaagg     360
aaacttgagc tgttcacata tgcccgcttc gatgcggagt ttaccttcat agcttccacc     420
ccagatggcg aggtgaagcc agtgttctta cagtacatgt tcgtccccc tggtgcacca     480
aaaccaacag ggcgcaacac ctacgaatgg caaactgcaa caaacccttc tgtgttggtc     540
aagagcacag atcctccagc acaagtctct gtaccgttca tgtcaccagc cagcgcatat     600
cagtggttct atgacgggta cccaaccttt ggaaagcacc tgcctgctga tgactttcag     660
tacggtatga ccccaaataa catgatggga tcgttctgtg ccaggatagt gggggaagga     720
gcgcctagtg tacacttggt tatccgtatc tacatgcgca tgaaacacgt gcgggtgtgg     780
attccacgac ctatgcgcag ccagccatac gttgcgaaga attaccctaa ctacaagggt     840
tctgagatca gtgcgcatc atctagtcgt aagtcaatca ccacatta                   888
```

<210> 35
<211> 912
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
     synthetic construct

<400> 35
```
gggccaatag aggagatcat ctcgaccgtc gccagcaatg cacttgccct cagtcagcct    60
aaaccggtgg ataattctgt acaaaacacc caacagagcg cgcccgtgca cagccaagag   120
gttccagcat taacagcagt agagactgga gcaacaagtg atgtggtgcc agctgatcta   180
gtgcaaacca ggcatgtagt gaatgtcaag tccagatctg agtccactat cgagtcgttc   240
tttgcaagag ctgcctgcgt gactattatg caggttgata actttaatgc caccaccacg   300
gaggacaaga ggaagttatt tgccaaatgg gccatcacat acacagacac agtacaattg   360
aggaggaaat tggaattttt cacgtactcc aggttcgatc ttgagatgac tttcgtgcta   420
actgaaagat actattctca gagctcggga cacgctagat cgcaggtgta tcaaatcatg   480
tacgtccctc caggagcacc aacaccaaat gcatgggatg attacacgtg gcagacgtct   540
tctaacccat caattttctt caccactggt aacgcacccc cacgggtttc aatcccattt   600
gtgggcattg caaatgctta ctcacacttt tatgatggct tcagcagggt acctttggaa   660
ggagagacca ctgactcagg tgacgcttat tatggcctca cttctatcaa tgactttgga   720
acacttgcag taagagtggt caatgactac aacccagcga gagtggagac aaggatcaga   780
gtctacatga aacctaagca tgtgagagtg tggtgtccac gaccccctag ggctgtgagc   840
tacagaggac ccggtgtgga cctactgtcc acctcagtga cgcccctatc taagcatgaa   900
ttgacaacgt ac                                                      912
```

<210> 36
<211> 918
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
     synthetic construct

<400> 36
```
ggcattgaag acttgatcca acaggttgca tcgaatgcgc tgcaaatctc acagccgacg    60
cgtccggcac tgccctctac agaaagtctt cccaacacac aacaatcggc accttcgcat   120
tctcaagagg tcccggcgct gacagcagtt gagacaggcg cgacaaatcc attggagccg   180
tctgacacgg tacaaacaag gcatgttatc cagactagat ccaggtcaga gtccacaata   240
gagtccttct tcgcgcgtgg tgcatgtgtg acaatcatga cagtggaaaa ttttaacgcg   300
actgaggcgg cagacaagaa aaagttgttc gccacttgga atattacata cacagacaca   360
gtgcagctca gaaggaagtt ggagatgttc acttactctc gatttgacat tgaatttacc   420
tttgtcacca cagaaaggta ctacgccagt aactcaggcc atgcgcgtaa tcaggtttac   480
caactcatgt atgtacccccc aggagcccct gtgccacaac aatgggatga ttacacgtgg   540
caaacttcct ccaacccatc ggtgttttac acatacggtg acgctccagc gcgcatttcc   600
ataccatttg tagggatagc taatgcctat tcccactttt atgacggcta tgcagtggtg   660
ccattgaaag attccaccca ggatgctggt gctgcctatt atggtgcaac ctcaattaat   720
gattttggaa tgttggcggt gagagtagtc aacgaattca acccagccag aatcacatct   780
aaattgagag tgtacatgaa accaaagcat gttagggtgt ggtgtcctag accaccaagg   840
gtggtgccgt acttcggacc cggtgttgat tataaggata gtttgacacc gctttctaca   900
aaagcactca acacttat                                                918
```

<210> 37
<211> 927
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =

synthetic construct

<400> 37
```
ggcttggaag acctcatcca acaagtggcc acgaatgcat tgagtctgtc gcagcccaca       60
agacccgcac ttccaccagc agaacaaagt gtgccaaaca ccagtcagac caccccagaa      120
cattcaaagg aagtacccgc actcactgca gtggagaccg gtgcaaccaa cccattggaa      180
ccaggtgaca cagtgcaaac tagacatgtt gttcaaacaa gatcaaggag cgaaagtacg      240
gtggaatctt tctttgcaag aggggcgtgt gtcacgatta tgggagttga caattacaat      300
gaaagcttga ccagtagtca aaaatccacc ctattcgcca cttggaatat tacatacact      360
gatacagtac agttgaggag aaaattggaa atgttcacct actccagatt tgacattgaa      420
tttaccttcg tagtaactga acgttactac tcgtcaaaca gtggccatgc cttgaatcag      480
gtgtatcaaa tcatgtatgt gccaccaggc gctccaattc ctaagaagtg ggatgattat      540
acctggcaaa catcatcaaa cccctcaata ttctacacct atggaacagc accacccaga      600
atttcgatcc cttttgtggg cattacaaac gcgtactcac attttatga cggatatgcg       660
actgtaccac tcaagacaga cactacggat ccggggggcgg ccttctatgg agcagtttcc     720
atcaatgact ttggtttgtt ggcggtgcga gttgtcaacg agcacaaccc ggtaagagtg      780
tcttcaaaga taagagtgta catgaagcct aaacatgtca gagtgtggtg cccacgacca      840
ccacgtgccg tggagtacta cggaccaggg gtagattaca aggcaaacac attgacacct      900
ctccctacca agaacttaac tacttat                                          927
```

<210> 38
<211> 888
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 38
```
ggtattgatg atatcataga taatgttgta accaatgctt tgaaggtgtc catgccacaa       60
gttcaagata cgcaatctag tggaccagtt aactcaaaag aagtacctgc attaacagct      120
gttgaaacag gggctactag tcaagttgac ccatcagacc taatagaaac tagacatgtt      180
attaataacc gcctcagatc tgagtgcaca atagaatcat tctttgggag gtcagcatgt      240
gtggccataa ttgggttatc taaccaaaaa cccaccagtg acaatgcagc caagctcttt      300
gctacatgga agattagtta tcttgatatg tatcaattga gaagaaaatt ggaattcttc      360
acatactcca gatttgatct tgagttaacc tttgtaattt cagaaagatt cttcacctca      420
acttcagctg ctgcaagaga ttatgtatac cagatcatgt acattccccc aggagcccct      480
atccctcagg tatgggatga ttacacatgg caatcatcca caaacccctc aatattctac      540
accacaggaa atgcatgccc tagagtgtcc atcccttttg ttgggatcgg tgcagcatac      600
tctcacttct atgatggatt ctctttagta cctttcaata ccatcgatgc tggtgcttca      660
aacaggtacg ggtacaccac cataaatgat tttgggacta tggcaatcag gatagttaat      720
gaatacgacc cagtcacaat tgatgcaaaa gtcagggttt acatgaaacc aaagcatatt      780
aaggtgtggt gccccagacc tccacgggca gtagcataca atgggccaac agtgaatttt      840
aatgaaaacc cccatgtaat gacagcagtt gctgatatta gaacttat                   888
```

<210> 39
<211> 909
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 39
```
ggtatcgaag atcttatcac cgaagttgca agcaacgctc tgaagttgtc acaaccaaaa       60
```

```
cccagcacac aacagagttt accaaacact agtagctcag aaccaactca ctctcaggaa    120
gcgccggcat tgaccgcagt agaaacagga gcaactagta gcgtagtacc agctgatctg    180
gtccagacgc ggcatgtgat acaaacacgt agccgaagtg agtctacagt tgagtcattc    240
tttgctcggg gggcgtgtgt aacaatcatg tcagtggaaa attacaatga aaccgctatc    300
gcagagtcca aattatttac caagtggaac attacctaca cagacacagt ccagttgaga    360
agaaaactag agatgttcac atactccaga tttgatattg agttcacatt tgtggtgact    420
gagcgttacc actccgcaaa ctcaggtcat gcactaaatc aagtttacca gatcatgtat    480
gttcctccag gtgcaccagt gccacaaaga tgggacgact acacatggca aacgtcatcc    540
aacccctcag tcttttatac ctatggtaca gcaccagcca gaatatcgat tccatatgta    600
ggcatagcca atgcctactc gcattttttat gatggcttcg ccaaagtgcc cattgaaggc    660
gagacgtcag atccaggtga tgcatactat ggtgcaacgt ccatcaatga tttcggcatc    720
ttagccatac gtgtggtcaa cgaacacaat ccagtgcaag tttcttccaa gattagagtg    780
tacatgaaac ctaaacatgt gcgcgtttgg tgtcccagac cacctagagc tgttccatac    840
tttggccccg gggttgatta taaaggtgac gccctcacac cactatcacg caaggattta    900
accacctat                                                          909
```

<210> 40
<211> 888
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 40
```
gggattgagg atacaatcga aaaagtggtt ggtgatgctc taagggtctc aatgccacaa     60
gttgccaaca cccagccatc aggacccgta aattctaagg aagttccagc actgacagca    120
gtggaaacag gtgcaaccag tcaagtcacc cctgaagatt tgatcgaaac caggcatgtt    180
attaacaata gactaagatc tgagtgcact gtggaggcct tctttggaag gtctgcatgt    240
gttgccatcc ttggtgtggt aaacaaaaag ccagacacca caaatgccaa agacctcttt    300
acaacatgga ggatcactta cctgcaaact tatcaactga ggaggaaact cgaactcttc    360
acgtattcta gatttgattt ggaattaacg tttgtcatta cagaaagata cttttcaggg    420
acagcagcca caaccagaga ttatgtttac caaataatgt atgtaccacc aggagccccc    480
ataccaaata cctgggacga ctacacctgg cagtcatcta ccaacccctc tgtcttctac    540
accacaggca atgccagccc acgcatgtct atacccttttg ttggtattgg tgccgcctat    600
gctcacttt atgacgggtt cagtgtggta ccattcaatc aaatagatgc aggagcatcc    660
aacaaatatg ctactcatc aatcaaagac tttggtacat ggcagttag aattgttaat    720
gagtttgatc cagtgacaat agaggctaaa gtcagagtgt acatgaaacc caaacatgtc    780
agggtgtggt gtccaagacc acctcgtgca gtaccatatc aaaactcatc agttgatttc    840
gcccaaaacg cagtagcaat gaaccaagta gccacaatta ggacgtat                 888
```

<210> 41
<211> 915
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 41
```
ggtatcgaag ataccattga cactgtcatt aacaatgccc tacaactatc tcaaccacag     60
ccaaataagc agttgacagc tcagtctacc ccctccacaa gtggagtaaa ctcccaggag    120
gttccagctc tgaccgctgt ggaaaccggt gcctcgggac aagcagtgcc cagtgatgtg    180
attgagacca gacacgtggt taattataag acccgatctg aatctactct tgagtctttc    240
tttggaaggt cagcttgtgt caccataatt gaggtcgaga acttcaatgc cactagtgaa    300
gcagacaaga ggaaacagtt caccacttgg ccaatcacat acaccaatac cgtgcaattg    360
cgcaggaaac tagaattctt cacttactcc aggtttgacc tagagatgac ctttgtagtg    420
```

```
acagaaagat attatgccag caacacaggt cacgccagaa accaagtgta tcaaataatg    480
tacattcctc ctggtgcacc acaacccaca gcatgggatg attacacgtg gcaaagctct    540
tcgaatccgt cagtctttta cacttatggg agtgctccac ccaggatgtc tataccgtat    600
gtcggtatcg caaatgcata ctctcttttt tatgatgggt ttgcacgagt accactgaag    660
gacgaaacag cggactcagg tgatactttt tacgggctag tcaccatcaa tgattttgga    720
accttagcaa taagagtagt gaatgaattt aacccagcta ggattacatc aaaaattaga    780
gtgtatatga aaccaaagca tgtaagatgc tggtgcccta gaccaccacg tgcagtgcca    840
taccgtggtg aaggagtaga tttttaattca agttcaatca caccactaac agcagtcgca    900
aacatcaaca cattc                                                    915
```

<210> 42
<211> 852
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
    synthetic construct

<400> 42
```
agcccagtgg aggaatccat tgagagaagc attggcagag ttgctgacac cattggtagt     60
ggaccatcca attcggaggc aataccggca ctcacagcag tagaaacagg acacacatca    120
caggttacac ctagtgacac gatgcaaaca agacatgtgc acaactacca ttcaaggtcc    180
gaatccagcg tagagaactt cctggcacgc tcggcttgtg tgttttatac aacatacacc    240
aacggtaaaa aaaaaaatgc cgccaaagag aagaagtttg caacgtggaa agtgagtgtt    300
agacaagccg cccaactaag aagaaagcta gagttattca catacttacg ctgtgacatc    360
gaattaacat tcgtcatcac cagtgcacaa gatccatcga ccgctaccaa cttggatgtg    420
ccagtgttga cccatcaaat aatgtacgtc ccacctggtg gtccagtccc tgaaaccgtg    480
gacgattaca actggcaaac atctacaaat cccagccttt tttggactga agggaatgca    540
cctccacgca tgtcaattcc attcatgagc ataggcaatg cctatagtat gttctatgat    600
ggttggtccg agtttaggca tgacggtgtg tacggcctga ataccctta caatatgggc    660
acaatatatg ctaggcacgt caacgctgac aacccaggta gcatcaccag cacagtgaga    720
atatacttca aacccaaaca tgtcaaggca tggattcctc gcccgcctcg tttggcacag    780
tatcttaaag ccaataatgt gaattttgag atcaccgatg tgacagaaaa gagagatagt    840
ctcacgacca cg                                                       852
```

<210> 43
<211> 846
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
    synthetic construct

<400> 43
```
agcccagtgg agggcgccat agagagagcc attgcacggg tcgctgacac tatgccaagt     60
ggcccaacca attcagaagc agtgcctgcc ctgacagcag tggaaacggg ccacacctcc    120
caagtcgtcc ccagtgataa catgcaaacc aggcacgtga agaagtacca ttcacgctcc    180
gaaaccagcg tcgagaactt tctgtgtagg tctgcatgtg tatatttttac cacatataag    240
aaccagacag gggcgaaaaa tagatttgct tcttgggtaa tcaccacaag acaagtggcc    300
cagctcagga gaaaactaga aatgtttacg tacttgcgtt tcgacattga actcacctttt    360
gtcattacaa gtgcgcaaga ccaatccact atttcccaag acgccctgt gcagacacat    420
cagataatgt acgtgccacc gggaggccca gtgccaacca aagttgacga gtatgtgtgg    480
caaacatcca ccaaccccag cgtcttttgg accgagggta acgctccacc acgtatgtca    540
gttcccttta tgagtatcgg taatgcttat agcacatttt atgacgggtg gtctgatttt    600
tcaaacaaag gaatatatgg gttgaacacc ttgaacaaca tgggaacatt gtacatccgc    660
cacgttaacg ggcccaaccc agtaccaatt accagcacag tgaggatata ctttaagccc    720
aagcatgtta aggcctgggt gcctaggcct ccaaggcttt gccagtacaa aacgtttagg    780
```

```
caagtcaact ttacagtgac tggagtgacc gagagtaggg caaatataac caccatgaat    840
actaca                                                               846
```

```
<210> 44
<211> 852
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 44
ggtgatgtgc agaatgctgt cgaaggggct atggtcaggg tggcagatac agtgcaaact     60
tcagccacaa actcagagag ggtgcctaac ttgacagcag tagaaactgg tcacacttcg    120
caggtagtac ctggtgatac catgcagact agacatgtga tcaacaatca cgtgaggtca    180
gaatctacaa ttgagaactt ccttgccaga tcagcgtgtg ttttcttcct agagtacaag    240
acagggacca aagaggattc caatagcttc aacaattggg tgattacaac caggcgagtg    300
gctcaactac gtagaaaact ggaaatgttt acttacctac ggtttgacat ggaaatcacc    360
gtggtcatta caagctcgca agatcagtct acatcacaaa accagaatgc accagtgcta    420
acacaccaga taatgtatgt accaccaggg ggacccatac ccataagcgt ggatgattac    480
agctggcaaa catccaccaa ccccagtatc ttttggaccg aagggaacgc tccggcacgc    540
atgtcaattc catttattag cataggcaat gcgtatagta atttctacga tgggtggtct    600
cacttctccc agactggcgt gtatggcttc actactctga caacatggg  tcaattgttc    660
ttccggcacg taaacaagcc caacccagcc gctattacaa gtgtggcgcg catttacttc    720
aaaccgaaac atgtacgcgc ttgggtgcct agaccaccgc gcttgtgtcc atacatcaat    780
agcacgaatg tcaactttga acccaagcca gtgactgaag tacgtaccaa cataataaca    840
acgggtgcct tc                                                        852
```

```
<210> 45
<211> 882
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 45
ggagatgagg tgaagcatga acccacagtg gccaacacaa cagcaagtgg accatcaaat     60
tcacaacaag taccggcact cacagcagtg gagactgggc acacctcaca ggtggttcca    120
agcgatacca tacaaaccag acatgttcac aattaccata gtagaactga atccaccctg    180
gagaacttcc tcggaagatc agcatgcgtg cacattgact cgtataagac caagggagtg    240
accggcgaga gcacccggta cgcatcatgg gagatcacca ctcgcgagat ggtgcagctg    300
cggaggaagt gtgaactctt cacctacatg cgatatgatc tagaaatcac gtttgtgatt    360
acaagtcgcc aggagcaagg ggccaaactg tcgcagaaca tgccagtatt aacacatcag    420
atcatgtatg tcccaccggg cgggcctata ccaaccagca acgagagtta cgcttggcaa    480
acgtcaacga acccaagcgt gttttggaca gaaggaagct cgccaccacg aatgtcaata    540

ccgtttgtta gcataggaaa cgcatacagc aatttctatg atgggtggtc gcacttctca    600
caaaacggtg cgtatggtta cacggcacta aacaagatgg gtaggatatt cgtgcgccat    660
gtaaacaaag agacaccact gcaagtcata agcacaatac ggatgtatat gaagcccaaa    720
cacgtgcggg cttgggtgcc aagaccacca cgcctgtgtc catacctgcg ggcgggtgat    780
ataaactttg aagtgactga tgttacagaa aaacgaaata acatcaatta tgtcccaacc    840
ccatcccaca gcagcagtgt gcacatgcgc ttgaacaacc at                       882
```

```
<210> 46
<211> 879
<212> DNA
```

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
     synthetic construct

<400> 46
gggggacgtcg aagaggcaat tgatagggca gttgcgaggg tggctgacac aatgccaacc   60
ggtccacgaa acactgagag cgtgcctgcc ctgacagcag tagagacagg ccacacctca   120

caggtcgttc ctggtgacac aatgcagacg aggcatgtta agaactatca ctccaggaca   180
gagtcatcaa ttgaaaactt cctgtgcagg gctgcgtgcg tgtatataac aacatacaaa   240
tcagctggtg gaacacccac agagcgatat gcaagttgga ggataaacac caggcaaatg   300
gtgcagctca ggaggaaatt tgagctcttc acatacttgc gctttgacat ggaaatcaca   360
tttgtgatca caagcacaca agatcctggg acacaattgg cacaagatat gcctgtacta   420
actcatcagc tcatgtatat cccacctggg ggccctgttc ctaacagtgc cacagatttt   480
gcatggcaat catcaactaa tccaagtata ttttggacgg aaggctgtgc tccagcacga   540
atgtcggtgc cgttcatcag cattggcaat gcctacacca attttacga tgggtggtcg   600
catttcaccc aagaaggggt ttatgggttt aactcactga acaacatggg ccacatatat   660
gtgaggcacg tcaatgagca aagcctgggt gtctcgacca gcaccgttcg cgtgtatttt   720
aaacccaaac atgtgcgtgc ttgggtacca agaccaccca gactgtgccc atacactaag   780
agttcaaatg tgaatttcaa accgaccgct gtcactgatg agcgaaagga tatcaacgat   840
gtaggcaccc ttcgaccaac agtgtacact aaccttgtg   879

<210> 47
<211> 843
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
     synthetic construct

<400> 47
ggagacgtgc aagatgcagt gacaggtgct atagtacgtg tcgctgacac tctcccaaca   60
ggtccctcaa ataatgaagc tatacccaat ttaacagcag tggagactgg ccatacctcg   120
caagtgacac caggcgacac aatgcaaaca cgccatgtgg tgaacatgca cacccgctct   180
gagtcgtcca tcgagaattt cctggcacgt tcagcatgcg tgtactacct tgattaccaa   240
acgggagaag ggcccggcga tcagtatttt ggccagtgga ccattaccac gaggagggtt   300
gcgcaattgc gtcgaaagct ggagatgttc acttatctaa gatttgacat ggaaatcaca   360
atcgtgatta ctagttcaca ggatcaatct accatctcga acccagatac accagttttg   420
acgcaccaaa ttatgtatgt accaccagga ggaccaatcc cagcaaaagt cgatgattac   480
agttggcaaa catccacgaa tcccagcgta ttctggactg aagggaatgc gcctgcccgr   540
atatccatcc cattcattag cgttggaaat gcatacagta gcttttatga cgggtggtcg   600
aacttctcac aaaacgggcg gtatggctac aataccctca acaacatggg acaattgttc   660
tttaggcacg ttaacaaacc cagccctaat actgtcacaa gcgtcgcccg catatacttc   720
aagcctaagc acgtgagagc ttggatcccg cgaccaccgc ggttgtgtcc atacataaat   780
gcgggagacg tgaacttcac tccgacacca gtgactgaaa agcgaaagga cctaataacc   840
acg   843

<210> 48
<211> 843
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
     synthetic construct

```
<400> 48
ggagatgtgc aggacgcagt ggctggggcc atagtgcgtg tggctaatac tctcccatca      60
ggcccctcaa acaatgaggc tatacccaac ttaacagccg tagaaactgg acacacctcg     120
caggtgacac cgggtgatac aatgcagacg cgccacgtag tgaacatgca cactcgttct     180
gagtcgtcaa tcgagaactt cctggcgcgg tcagcatgtg tatactacct cgattaccga     240
acaggaacgg ggcctggcaa tcaatacttt agccagtgga ctattaccac aagacgagtt     300
gcgcagctgc gtcgaaaatt ggagatgttc acctatctaa ggttcgacat ggagatcacg     360
attgtaataa cgagttcaca agatcagcct accgtccgaa acccagacac accggtcttg     420
acacaccaaa tcatgtatgt gccaccagga gggccaatcc cagcaaaggt cgacgattac     480
tgttggcaaa catccacaaa ccccagtgtc ttctggactg aagggaacgc accagcccgg     540
atatccatcc cgttcatcag tgtcgggaat gcatatagta gtttctacga tggatggtca     600
aatttctcgc aaaatgggcg gtatggctac aacaccctga acaacatggg gcaattgttt     660
ttcaggcatg tcaataaacc cagtcccaac actgtcacaa gtgttgcccg catatacttc     720
aagcccaaac acgtgaaggc atgggtcccg cgaccaccgc gattgtgccc ttacattaat     780
gctggagatg taaatttcac ccccacatcg gtcactgaga agcgagcgag cctgataacc     840
aca                                                                   843

<210> 49
<211> 843

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 49
ggggacgtgc aagatgccgt gactggagcc atagtgcgtg tcgccgacac actgcacacg      60
ggaccctcga acaacgaagc aatacccaat ttgacggccg tggaaacagg gcatacatcg     120
caagtgacac caggcgatac aatgcagacg cgtcacgtgg tcaacatgca cacccgttca     180
gagtcatcaa ttgagaactt cctagctcga tctgcgtgtg tgtattacct cgactatcaa     240
acagggtcag gacctggcac ccaatacttc ggccagtgga ccatctccac aaggagagtt     300
gcgcaactgc gccggaagtt ggaaatgttc acctacctaa gatttgacat ggaaataaca     360
atcgtgatca ccagttcgca agatcactcc accatctcaa atccagatac accaatcatg     420
acgcaccaaa ttatgtacgt accaccaggg ggtccaatcc cggcgaaggt cgacgactat     480
agctggcaaa catctacaaa ccctagtgta ttttggacag aagggaacgc acccgcccgc     540
atatccattc cattcattag tgtcggaaat gcctatagca gcttctacga cgggtggtca     600
aatttctcgc aaaacggccg atatggatac aacactttga acaacatggg acaactattc     660
ttcagacacg tgaataagcc cagccccaac accttcacaa gtgttgcccg tgtatacttc     720
aagccaaaac acgtgaaggc gtggattcca cgaccaccgc gattatgtcc atacataaat     780
gcgggagacg tgaatttcaa accaacaccc gtgaccgaaa agagggcgag cttaatcacc     840
aca                                                                   843

<210> 50
<211> 876
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 50
ggagactcag agcacgcagt ggaaagcgcc gtatctaggg tggcagatac aattatgagt      60
ggcccgtcaa actcccaaca ggtccccgct cttactgcag ttgaaactgg acacacatcg     120
caagttgttc caagtgatac catccaaacc agacatgtgc agaatttcca ctctaggtcc     180
gagtcgacca ttgaaaattt cctgagtagg tcagcatgtg tgcatatcgc caattacaac     240
```

19

```
gcgaagggcg ataagacgga tgtggacagg tttgacaggt gggagatcaa cattcgtgaa      300
atggtgcaac tacgtaaaaa gtgtgagatg ttcacatatc tacgctatga tattgaagtt      360
acatttgtta taaccagcaa acaggatcag ggccccaaac taaaccagga tatgcctgtt      420
cttacccacc aaattatgta cgtaccccca ggaggttcag tacctagcac cgttgagagc      480
tatgcgtggc aaacatcaac aaaccctagc gtgttttgga ccgaggggaa cgctccagct      540
agaatgtcca tacccttttat cagcataggg aacgcttata gtagcttcta tgatggatgg      600
tcacacttta ctcaaaaagg ggtctacgga tacaacacat taaacaagat ggggcagcta      660
tttgtcagac atgtgaacaa acagaccccc acgccagtta ctagtaccat aagggtttac      720
ttcaaaccaa agcacattag agcttgggtc cctaggcccc cgcggttatg cccctatgtg      780
aacaagacaa atgtaaactt catcaccaca caggtaacag aacctacaaa tgacctcaat      840
gacgtgccca agtctgagca taacatgcac acatat                                876
```

<210> 51
<211> 867
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 51
```
aacgacgttc agaacgcggt ggaacggtca attgttcgtg tagcggacac attacccagt       60
gggccaagca actcagaaag cataccagca ctcacagcag ccgagactgg acatacctcg      120
caggtcgtcc ccagcgacac catccagacg cgacatgtga ggaattttca cgttcggtct      180
gagtcatcgg tagagaattt tcttagcagg tcagcttgcg tgtacatcgt ggagtacaaa      240
acccgggaca cgactcccga caagatgtat gatagctgga ttatcaatac caaacaagtg      300
gcgcagttga gaaggaagct ggagttcttt acctatgtca gattcgacgt ggaagttacc      360
tttgtcataa ccagcgtgca agatgactcc acaaaacgga acaccgacac cccagtgcta      420
actcatcaaa ttatgtatgt gccgccagga gggcccatac cacaagcggt ggacgattat      480
aactggcaaa cttccaccaa ccccagcgta ttttggactg aggggaacgc gccaccaagg      540
atgtctattc cgttcatgag tgttggcaat gcatacagta acttctacga cgggtggtcc      600
cactttctc aaactggggt ttacgggttt aacaccctaa acaacatggg taagttatat      660
ttcaggcatg taaacgacag gactattagc ccaatcaaaa gtaaggtcag aatatatttc      720
aaacccaaac acgtgaaggc atgggtaccc agaccgccga gattgtgtga atacacccac      780
aaggataacg tggactatga accaaagggg gtcacaacat cacgcacttc aatcaccatc      840
accaactcca cacacatgga gacgcac                                         867
```

<210> 52
<211> 867
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 52
```
aatgacgttc aaaatgcagt cgagcaatca attgttcgtg tggctgacac gttacccagt       60
ggacccagta attcagagag cataccggca ctgacggccg ccgagactgg ccatacttct      120
caagttgtgc ccagtgatac tatacagaca cgccacgtaa aaaactttca tgtgaggtcg      180
gagtcgtcag tagagaactt tctcagtagg tccgcttgcg tgtatatagt gggatacaag      240
accacagatg cgacccctga caaaatgtat gacagctggg ttatcaacac aaggcaggtg      300
gcgcagctaa ggagaaaatt agagttcttc acctatgtta ggtttgatgt tgaggtcacc      360
tttgtgataa caagcgtgca agacgattca actagacgga acacagacac ccccgttcta      420
acccaccaaa tcatgtacgt acccccaggt gggcccatcc cgcaggcagt ggacgactac      480
aattggcaaa cttccacaaa tcccagtgta ttttggacag aagggaatgc cccaccaaga      540
atgtccatac cattcatgag cgtaggtaac gcatacagca atttctatga tgggtggtct      600
cacttctctc aaactggggt gtacggtttc aacaccctga acaacatggg caagctatac      660
```

20

```
ttcaggcatg tgaacggcaa gacaataagc cctatcgcaa gcaaggttag gatttacttc      720
aaaccaaagc atgtgaaggc atgggtgccc agaccaccgc gattgtgtga atacacccac      780
aaggacaatg tggattacga accaaaggga gtcacaacat cccgtacatc tatcacaatt      840
agcaattcca ctcatatgga aacatat                                         867
```

<210> 53
<211> 867
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 53
```
aacgacgttc agaacgcggt ggaacggtca attgttcgtg tagcggacac attacccagt       60
gggccaagca actcagaaag cataccagca ctcacagcag ctgagactgg acatacctcg      120
caggtcgtcc ccagcgacac catccagacg cgacatgtga agaattttca cgttcggtct      180
gagtcatcgg tagagaattt tcttagcagg tcagcttgcg tgtacatcgt ggagtacaaa      240
acccatgaca cgactcccga cgagatgtat gatagctgga ttatcaatac cagacaagtg      300
gcgcagttga gaaggaagct ggagttcttt acctatgtca gattcgacgt ggaagttacc      360
tttgtcataa ccagcgtgca agatgactcc acaagacaga acaccgacac cccagtgcta      420
actcatcaaa ttatgtatgt gccgccagga gggcccatac cacaagcggt ggacgattat      480
aactggcaaa cttccaccaa ccccagcgta ttttggactg aggggaacgc gccaccaagg      540
atgtctattc cgttcctgag tgttggcaat gcatacagca acttctacga cgggtggtcc      600
cactttttctc aaactggggt ttacgggttt aacaccctaa acaacatggg taagttatat      660
ttcaggcatg taaacgacag gactattagc ccaatcacaa gcaaggtcag aatatatttc      720
aaacccaaac acgtgaaggc atgggtaccc agaccgccga gattgtgtga gtacacccac      780
aaggataacg tggactatga accaaagggg gtcacaacat cacgcacttc aatcaccatc      840
accaactcca cacacatgga gacgcac                                         867
```

<210> 54
<211> 876
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 54
```
ggcgacaccg aaacggctat tgacaatgca atcgccaggg tagcagatac ggtggcgagc       60
ggtcctagta attcgaccag tatcccagca ctcacagcag ttgagacagg tcacacgtca      120
caagtcgagc ccagcgatac agtgcaaact agacatgtca aaaactacca ctcgcgttct      180
gagtcaaccg tggaaaactt tctaagtcgc tccgcttgtg tgtacatcga agagtactac      240
accaaggacc aagacaatgt taataggtac atgtcgtgga caataaatgc cagaagaatg      300
gtgcaattga ggagaaagtt tgagctgttt acatacatga gatttgatat ggaaatcacg      360
tttgtaatca caagtagaca actacctggg actagcatag cacaagatat gccgccactc      420
acccaccaga tcatgtacat accaccaggt ggcccggtac caaacagcgt aacagatttt      480
gcgtggcaga catcaacaaa ccccagtatt ttctggacag aaggaaacgc gccacctcgc      540
atgtctattc cattcatcag tattggcaat gcatatagca acttctatga cgggtggtca      600
cactttttccc aaaacggtgt gtacggatac aacgccctga caacatggg caagctgtac      660
gcacgtcatg ttaacaagga cacaccatac cagatgtcaa gcacaatccg agtgtatttc      720
aaacccaagc acatccgagt atgggtccca cggccgcctc gactgagccc gtacatcaaa      780
tcaagtaatg taaattttaa ccccacgaac ctgacggacg agcggtcatc catcacatat      840
gtgcccgaca ctatacgtcc agatgtgcgc accaac                               876
```

<210> 55
<211> 843

```
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 55
ggtgatgtcc agaatgcagt tgaggggggca atggttagag ttgcagatac cgtgagcact    60
agcgccacca actccgaaca agtgccgaac ctgaccgcgg tggagaccgg tcacacatcg   120
caggtagtgc ccggcgacac tatgcagacc aggcacgtag tgaacaagca tgtgcgatct   180
gaatctacaa ttgaaaattt cctcgcacgt tcagcctgtg tgtactttct tgagtacaag   240
actggtacca agactgactc caacgccttc agcaattggg tcatcacaac gcgcaaggtt   300
gcgcagctga ggcgcaagtt ggagatgttt acatacttaa ggtttgatat ggagattact   360
gtggtcatta ctagctccca agaccagtcc acatcacaaa atcaaaatgc gcccgtcctg   420
actcaccaga ttatgtatgt accacctggt ggcccagtgc ccactagcgt tgatgattat   480
tgctggcaaa catccacaaa cccaagcata ttttggacgg aaggaaacgc acctgccaga   540
atgtccatcc cctttatcag cattggaaat gcttatagca acttttatga tgggtggtca   600
catttctcac agaacggagt ctatggtttt accaccttaa acaacatggg ccagctgttt   660
tttaggcatg ttaacaagcc taacccggcg acaataacca gtgtggcccg catttacttc   720
aagccaaaac atgtgagggc ctgggtgcct agaccgccac ggttgtgccc ttacatcaac   780
agtagcaacg tgaacttcga cccaaaacct gtggcagagg tcaggtctag catcatcacc   840
acc                                                                  843


<210> 56
<211> 876
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 56
ggtgatgtgg ttgaagccat tgagggcgca gttgctagag tagcagacac tatcagcagc    60
ggcccaacaa attctcaagc agtcccagca ctcacagcgg tggagactgg acacacctcg   120
caagttgtac caggtgatac catgcagacc agacacgtaa agaattacca ctcacgatca   180
gaatcgacca ttgaaaattt tctgagtagg gcggcttgtg tctacatggg tgagtattac   240
actacaaata cagatgagac caagagattt gctaattgga caatcagcgc aaggcgcatg   300
gtacaaatga ggaggaagct tgaaatgttc acgtacgtcc gtttcgacgt ggaggtgaca   360
ttcgtaatta ccagcaaaca ggaccaaggg aatcggttgg acaagatat gcccccgctc    420
acacaccaga taatgtacat cccgccaggt ggtcgtatac ccaaatccac cacagattac   480
gcatggcaaa cgtcgacaaa ccccagcatc ttttggacgg agggtaacgc gcccccccagg   540
atgtccattc ctttcatgag cattggaaac gcatatagca attttttatga cggttggtct  600
cacttctctc aaaatggcgt gtacggatat aacacactaa accacatggg tcaattatac   660
atgcgccatg taaatggacg atcacctctt ccaatgacca gcacggtgag ggtgtacttc   720
aaacccaaac atgtgaaaac atgggtgcca cgacccccaa gattgtgcca atacaaaaac   780
gcctcgacag taaacttttc acccacaaac atcacagaca agagggatag catcacttac   840
attccagaca ccgtgaaacc cgacatgaca acatat                              876


<210> 57
<211> 861
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct
```

```
<400> 57
ggggatgaga gtgcaaaggc tacagtttcc aacacacagc ctagcggtcc aagtaattct      60
gtcagcgtgc caatgcttac tgctgctgag accgggcaca catctcaagc agtacccagt     120
gacactatac agaccaggtg cgtagtgaac caacacaagc ggtcggaatc atccgtggaa     180
aatttcctgt gtcgctccgc ttgcgtatac tacacaacct atgacactca cggggatgca     240
gccgacgcaa agtacgccag ttggacgata accacccgaa aagctgcaca gctgcggaga     300
aaactagaga tgttcacata cttgaggttt gatttagaag tgacattcgt tataacaagt     360
gcacaagtaa catctaccaa taaacgtcag gacacgcctg ttctcacgca tcaagtcatg     420
tacgtgccac caggtggtgc agtacccgct agtgtggacg attatgcgtg gcagacgtcc     480
acaaacccaa gtatcttctg gacggaaggg aatgcaccag cacgcatgtc tatacccttt     540
atcagcgtgg gcaacgcata cagtagcttc tatgatgggt ggtccaactt tacacagaat     600
ggagtttacg ggttcaacac gctaaacaac atgggaaagc tatacgtacg acacgtcaat     660
ggagctagcc ccggccctgt gaagagtacc atacggtttt acatgaagcc caaacacgtg     720
aaggcttgga tacccagacc tcctcgcctc tgcgagtacg aaaaatcagg caatgtaaac     780
ttcaaaccca agggcgtgac agagagccgg acgtctatca aattagaaaa accaaaccct     840
gcgtccaaat taatgaacca c                                              861
```

```
<210> 58
<211> 894
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct
```

```
<400> 58
aatgatccag agcaagctat aaatcgggcg ctagcgaggg tggcagacac agttcgtagt      60
gggccgtcta actctgaaca aattcccgca ctgacagccg tggagacagg gcatacatca     120
caagtcgtcc ccagtgacac aatgcaaacc cggcatgtga agaattacca ctccaggtca     180
gagtcaacaa tagagaactt tttgtgtaga tcggcttgcg tgcacatcgc aacatacaag     240
gctaaaggcg gagctggaga cgtcgaccgg tacgacagct gggacataaa cataaaagag     300
ctggtacagt tgcgacgcaa gtgcgagatg tttacgtacc taaggtttga tatggaggtc     360
acctttgtga ttaccagcat acaggagcag ggcaaagcac tgacccagga catgccggtg     420
ctaacgcacc aaataatgta cgttccaccg ggcggtgccg tgcctagtgg tgcagaaagc     480
tttgcgtggc agtcatcaac gaatcccagt gtgttctgga cagaaggcaa tgcaccagca     540
cgtatgtcta tacctttat aagtattggg aacgcttaca gtaatttcta tgatgggtgg     600
tcccacttta cccagaacgg tggttacggg tacaacacac taaacaaact gggtaagatc     660
tacgtcaggc atgtgaacaa acaaacccc acggatgtca ccagcaccgt gcgaatttac     720
ttcaagccca aacacgtgcg agcttgggtg cctcgcccgc ctagactatg tccttataag     780
aacaaggcaa atgtaaactt tgaagttact agtgtaacca ctgccagaac gagtcttaat     840
gatgtcccca ctcccaacca cagtagtagc gtgcacctgc gcatgcacac gcac          894
```

```
<210> 59
<211> 882
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct
```

```
<400> 59
ggtgatgacc aacacaagac caatacagtg acagacacag agcagagtgg cccgtcaaat      60
tccgaacgcg tcccagccct cacagcagtg gagactggcc acacttcgca ggtcgtaccc     120
agcgacacag tgcaaactcg ccacgtacgc aattaccact caaggacaga gtctacctta     180
gagaattttc ttggtaggtc agcatgtgtg cacatcgaca catacaaggc taagggtgaa     240
aaaggatctt ctgagaggta cgcgtcatgg gagataacta acagggagat ggtgcaattg     300
```

```
cgccgaaaat gtgagatgtt cacatatatg aggtatgacg tggaaataac atttgtgata      360
accagctacc aggagcaggg cacacgattg gcccaggaca tgcctgtact aacacaccaa      420
atcatgtacg tgcccccggg tgggcctgtg ccaacaagca cggagagcta tgcatggcag      480
acctcaacga accctagcgt cttttggact gagggcaacg caccaccgcg tatttccata      540
cccttcatca gcataggaaa tgcgtactgc aacttttatg atgggtggtc acatttctca      600
caagatgggt cctatggcta cacagcgctc aatagaatgg ggaaaatata tattagacat      660
gtaaataagg agacccccac acaggtcatt agtaccgtga ggatgtacat gaaaccaaaa      720
cacattcgcg catgggtgcc cagacccccc cggctgtgca aatacctaca ctcaggcaac      780
atgaacttca acgtggagga cattacagag gagcggaacg atataaacca tgtacccacc      840
cccagccaca gcagtagtgt gcgtgtgcgt cttggcacca ca                        882
```

```
<210> 60
<211> 867
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 60
ggtgatgttg aggactcagt aaacagagca gtggttaggg tagcagacac catgccaagt       60
ggaccatcca attcgcaggc agtacctgcc ttgacagccg ctgagacagg tcacacgtct      120
caagtggtgc ctggtgataa catccaaaca cgtcatgtgc acaactacca ctccagaact      180
gaatccagta tcgaaaattt cttcgggcgt tccgcatgtg tagtggtcaa aacatataaa      240
atgggtcaaa aagttgtagc tacagacaga tatgatagtt ggatgatttc cattagggac      300
atggtacaac taagacggaa gtgtgaaatg ttcacgtaca tgagatttga tttagagatc      360
accttcgtgg tcacgagtta ccaacaatat agtacatcct tgacacagga catgccagtg      420
atcacgcatc agttcatgta tgtgccgcct gggggtccgg ttcctgagag tgtaaatagc      480
tacgcttggc aaacgtcaac caatcccagt atattctgga ctgagggtaa tgccccagca      540
aggatgtcca ttcccttcat cagtgttggg aacgcatata gctgcttcta cgatggctgg      600
tcacacttca cacagaaggg ggtttatggt tataacactc tcaacaacat gggcaaattg      660
tacatgcgac acgtgaacaa aaatagcccc acagagatca taagcactct tcgtgtgtat      720
ttcaagccaa agcacgtgaa agcgtgggta cccagaccac ccaggctatg tccatacaaa      780
tataaggcaa atgttgactt tgaagtgact ccaatcacag acaagcgaga ctccataacc      840
agcataccag tccccaagca cactcat                                         867
```

```
<210> 61
<211> 861
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 61
ggggataacc aggatcggac ggtcgccaac acacagccta gcggtccgtc caactccacg       60
gaaattccag ccttaacagc ggtggaaacg gggcacacct cacaagtgga tcccagtgac      120
actatccaga ccaggcacgt ggtaaacttc cactcacgtt ctgagtccac tatagaaaat      180
ttcatggggc gtgcagcatg tgtgttcatg gatcagtata aaatcaatgg agaagagacg      240
tccactgata ggttcgcagt gtggaccata aacataaggg agatggccca attaagaagg      300
aagtgtgaaa tgttcacgta catgcgtttt gatatcgaga tgacaatggt cattaccagc      360
tgtcaagacc agggaacgat actagatcag gacatgcctg ttttgacgca tcaaattatg      420
tacgtcccac caggggggccc aatcccagcc aaagtagata gttacgagtg gcagacatca      480
acaaacccca gcgtcttctg gacggaaggt aatgcaccac cgcgtatgtc tattccattc      540
attagcgtcg gcaatgctta tagctcattt tacgatggtt ggtcacactt cacacaggac      600
ggtacctatg ggtatacaac ccttaatgca atggggaaac tgtacattag gcatgtgaat      660
aggagcagcc ctcatcagat aaccagcacg atcagagtat acttcaaacc caaacacatc      720
```

```
aaggcatggg tgccccgacc accacgattg tgcccgtata taaacaaaag ggacgtaaac      780
tttgtagtca cggagataac agactcaagg acttccatca ctgatacacc acacccagaa      840
catagtgtcc tggcaacgca t                                                861
```

<210> 62
<211> 879
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 62
```
ggagacatcg tggaggctgt ggagggagcc atctcgcgag tggcagatac tgttagtagt      60
gggcccagta actctcaagc agtaccagcc ctcacagcag tcgaaacggg tcacacttct      120
caagtcaatc ctagtgacac catgcagacc agacacgtga caaattacca ctcgcggtca      180
gaatccagca tagaaaattt ccttagccgc tctgcttgtg tgtatatggg cgaatacagc      240
acacaagcat cagatgagac caaaaagtac atgtcatgga ccataagccc aaggaggatg      300
gttcaaatgc gcaggaagtt tgagctcttc acttacctgc gttttgatgt ggagattact      360
tttgtaatca ccagcagaca agtcaaggta gggacacaat taggccaaga tgcccccccg      420
ctaactcacc aagtcatgta tataccccca ggaggcccag tacctgattc agttggtgat      480
tacgcatggc agacttccac taaccctagt atcttttgga ccgaaggtaa tgcatcaccc      540
aggatgtcaa tacccttcat tagcataggt aacgcctata gcaactttta tgacgggtgg      600
tcgcattttc accagaatgg cgtctatgga tacaacacgc tgaaccatat ggggcaactg      660
tacgtgcggc atgttaacgg cccttcacca ttaccagtga caagcacagt cagggtctac      720
tttaaaccca aacacgtgaa ggcttgggta ccgagggcac ccaggctatg tcaatatgta      780
aatgcatcca ctgtgaactt cgagccaaca gacatcactg agtcacgcac tgacatcaac      840
catgttccag acaccgtgaa gccagatctc caaacatac                            879
```

<210> 63
<211> 843
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 63
```
ggggacgtgc acgatgcggt ggttggggcc atgacccgtg ttgcagacac gataagtagt      60
gggccaagca attcagaaag cgtgccagca ttgactgcag ccgagacagg acacacatca      120
caggtagtac cgagtgatac catgcagacc agacatgtgc ggaatttcca cacaagatca      180
gagtcttcaa tagaaaattt catgagtcgc tccgcctgtg tctactatac taagtataag      240
accaaagacc cggacccaac ggagatgtac tctagttgga aggttaccac caggcaagtg      300
gcacaactca ggaggaagat ggagatgttc acttatttgc gctttgacgt agaagtgaca      360
tttgtaataa ctagctcgca agatcagtcc acgagtgttg cacaggacgc acctgttctc      420
actcaccaaa tcatgtacat cccacccgga ggcccggttc ccaaatcagg tagggattac      480
tcatggcaat cctgtactaa cccaagtgtt ttctggactg agggtaatgc accaccacgc      540
atgtgtattc cgttcattag tattggaggg gcatatagtt cattctatga cgggtggtcc      600
cactttaacc aacaaggtcc gtacgggtat aacactctca atgacatggg tcaactgtat      660
tttaggcatg tgaacgaggg tagcccaggg gcggtaacaa gctacatcag aatatacttc      720
aaacctaaac atattagagc atgggtgccc agaccaccta gattgtgtca gtatgagaaa      780
caagggagcg ttgacttcaa ggtgcaggga gtaactgatg ctcgtacctc gctcaccact      840
aca                                                                   843
```

<210> 64
<211> 885
<212> DNA

25

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
     synthetic construct

<400> 64
```
aatgacccag cacaagccgt gttgagtgcg atcggtcgtg tcgctgacac cgtcgctagc      60
gggccatcga attcagagag agttccagtt ctaaccgctg cggagacagg tcatacctca     120
caggtggttc ccagcgatac cattcagacg cgccacgtcg tcaacttcca cacaagatcg     180
gagtcaacaa ttgaaaattt tatgtgtcgc tccgcctgcg tgtacatcgc ccggtacggt     240
actgaaaagc aaggggaaca aatatccaga tacaccaagt ggaagatcac cactaggcag     300
gtggcgcaac tgcgcaggaa gatggagatg ttcacataca tgcgatttga tttggaaatg     360
acatttgtaa tcacaagctc ccagcgtatg tcaacggcat atgattcaga cacaccagcc     420
ctcacccacc aaataatgta cgtgccacct gggggcccgg agccccgtca ttatgaggat     480
ttcgcctggc agacatccac aaatccaagc atattttgga ccgaaggtaa cgcaccacca     540
cgcttatcaa tcccatttat gagtgtggga aatgcctatt gcaattttta tgatgggtgg     600
tctcactttt cacaaagtgg agtgtatggg tttaccacct aaataacat gggacaactg      660
ttcatgcgcc atgtcaataa gtcaacagcg caccccattg atagtgtggt gcgagtttat     720
tttaaaccaa agcatgttaa ggcgtgggtt ccaagacctc cccggttgtg cccatacatc     780
tatgcaagga acgtggattt tgagccacaa ggtgtcactg aatcaagaga aaagataaca     840
ctagataggg atactcacac ccctatgcgc acatgcgggc cgttc                     885
```

<210> 65
<211> 882
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence; Note =
     synthetic construct

<400> 65
```
ggagatgtct gtgaggaagt agagagggct attgtcaggg ttgcagatac tgtcggacgc      60
ggtcctgcta acactgagag tgtaccagcg ctgactgcag ttgaaactgg acacacttca     120
caagttgtac ccggggacac catgcaaacc agacatgtta aaaactttca cacgcggtca     180
gaatcatctg tggaaaattt catgtgcaga gcagcgtgtg tgtattatgt ggattaccac     240
acacaaaatg acagtgagga tgaaaaatat gcatcttgga ttatcaacac gagacaggta     300
gcacagctac gcaggaaaat tgagctgttc acatacacta ggtttgatgt cgaaatcaca     360
ttcgtgatca ccaccacaca gcagcaatcc acagctccca accccgacac tcctctgctg     420
acacaccaaa tcatgtatgt gcccccgggt ggcccagtgc caaatagtgc taccgattat     480
tgttggcaat catccacaaa tcccagtata ttctggaccg agggtagcgc accacccaaa     540
atgtcaatac cctttataag tgtgggaaat gcatacagca gtttttatga tgggtggtca     600
catttcactc aaaacggggt gtacgggttc aacactctga acaatatggg caaattatac     660
ttcaggcacg taaatgacaa caccgtaggg ccatatgtga gcaaagcccg catttatttc     720
aaaccaaagc atgtgcgtgc gtgggttccc aaacctccca ggctctgtga atacaacaat     780
cgagccaacg tgaactttga accacgaggg gttaccgatg ccaggtctag tatcacggcc     840
acaaccgaca cgatcactga gagcacaggg atgcaaacga ct                        882
```

<210> 66
<211> 876
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
     synthetic construct

```
<400> 66
aatgatccag caactgccat agttagatcg gttgagagag tggctgatac catagcaagt      60
ggacccacta actcagagag agtgccagca ctaaccgccg ttgaaacagg tcacacctca     120
caggtagtcc cgagcgacac catgcaaact aggcatgttg tgaaccatca cattagatca     180
gagtcctcta ttgaaaactt cctgagcagg tccgcctgcg tgtacatcga catgtatggg     240
acaaaagaga atggtgacat caagcgcttc accaactgga gaataaacac acgtcaggtc     300
gtgcagctaa ggcgcaagct ggaaatgttt acatacatta gatttgatgt tgaaatcact     360
tttgtaatca ctagcacaca gggaacaccg actcaaaaga acaaggatac cccagttctt     420
acacaccaaa tcatgtatgt gccaccaggg ggcccaatcc ctgtatctta tgaagattat     480
tcttggcaga cctctacaaa tcctagtgtt ttctggacag aagggaatgc cccagcccgt     540
atgtcaattc ccttcatgag cgtagggaac gcctattgta acttttacga cgggtggtca     600
cacttctcac aatcgggtgt gtatgggttc actacactca ataacatggg tcagttgtac     660
tttcgacacg tgaacaagga cacccttgga ccatacaata gcacggttcg ggtttacttc     720
aaacccaaac atgtgaaggc atgggtaccc agaccaccgc gcctgtgcga ctacgtttac     780
gcacataatg ttgacttcac accaaaaggg gttactgaca gcagggacaa gatcaccctg     840
gaccgtgatg aacacgtgcc gtcagtggtt aaccac                              876

<210> 67
<211> 870
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 67
ggagatgatc caccgcattc gatctcaaac acggttgcaa acaccaaccc tagtggtcca      60
accaactcag aaaggatccc agcgctcaca gcagcggaaa ctggtcacac ctcgcaggtg     120
gtcccgagtg ataccgtaca aactcgttgt gtgaaaaact tccacactcg atcggagtca     180
tcaattgaga acttttgtgt cagatcagct tgcgcacaca tgtcatcgta tgaggccttc     240
ccaacaacaa cacaagacgg tacacaaagg ttcgccaatt ggacgattag tgtgaaagac     300
atggtgcagt tgaggaggaa atgtgagatg ttcacgtact taagatttga catggaggtg     360
acttttgtga taactagtgt gatcgaaact acaaaaggga aagtaccggc accagcagtc     420
acacaccaag taatgtacat tccaccaggc ggacctattc cagctagcgt tgaaagttat     480
gcctggcaaa catccaccaa cccaagcgtg ttttggacag aagggaatgc tcccccacgc     540
atgtctatac catttatcgg cattggtaat gcctacagca tgttctatga cggatgggcc     600
agtttcagac aatcgggtgg atatggatac agcaccctga accacatggg ccagatattc     660
gtaagacacg tgaatgcaac cataccaaac ttgatcagca cagtcaggat atatttcaag     720
cccaagcacg ttagggcttg gattcctaga ccgcccaggg tgtgtcagta catttacaag     780
gcaaatgtag actacgcagt gtcaaatatc actgaaaagc gagatagtat aagatggaca     840
ccaacaaccg gtccgtcaat gacatcccac                                     870

<210> 68
<211> 855
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 68
ggtgacgacg caaggactgt tagcgacaca caaaagagcc agccatctaa ctctgagcaa      60
gtgcctgcct taacagcggt tgagactgga cacacctctc aagttgagcc cagtgataca     120
gtacagacac gacatgttgt caactcacac agtaggacag agtcgacaat tgagaatttc     180
tttgggaggg ctgcgtgtgt gagggtgaga gagtactcta tagggcatga tttggcagcg     240
gacgaaacat atgatagctg ggccattaca gtgcgagaca tggtgcagct tcgtaggaag     300
```

```
tgtgagatgt tcacatacat gaggtttgac ttggaagtga cgctagtcat caccagctat      360
caagaaccag ggacaatcac cacccaggat atgcccgtcc taacccacca gattatgtat      420
gtgccgccag gaggcccggt cccagccaag gctgacagtt acgcgtggca aacgtcaaca      480
aatcccagta tattctggac cgaaggcaac gctccacctc ggatgtctat cccatacatt      540
ggcatcggca atgcatatag cagctttat gacgggtggt cgagcttcaa caactcgggt       600
gtgtatggct acacaaccct gaataacatg ggtaaactgt acttcagaca cgtgaacaaa      660
cacagcccaa acactattaa gagcactgtg aggatatatt tcaagcccaa gcacgtccag      720
gcgtgggtcc caagaccacc gcgcttgtgc ccgtatctga ataagaggga tgtcaacttt      780
gaagtgcaac ccgttacgag caagagagac agtattaact gggtgccaca aacaaaccgc      840
caagtgtaca atcat                                                        855
```

```
<210> 69
<211> 876
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 69
aatgaaccta gtagtgccat tgagagagca attgtgcgcg tagcagatac tatggccagt       60
gggcctgcaa actcagagca aatccctgcc ctaaccgctg ctgagactgg tcacacctcg      120
caagtggttc ccagcgacac tatgcaaacc cgccatgtat gtaactacca caccagatct      180
gaatcatcga tcgagaactt cctatgcagg gctgcatgtg tctacatagt gagttacaaa      240
acacagggcg acgaacaaac cgacaaatac gctagttggg agatcaacac gcggcaggtg      300
gcacagttaa ggagaaaatt ggaattcttt acttacataa gatttgacat ggaggtaaca      360
tttgtgatca ctggttcaca agacaccagc acacagacta acacggatac gccagtgcta      420
acccatcaaa ttatgtatgt gcctcccggt ggtccagtac cgacatcagc cacagattac      480
agctggcaga catctacaaa tcccagtgtg ttctggacag aagggaatgc gcctccccgt      540
atgtccatac ccttcatgag cataggcaat gcgtatgcta atttctatga tgggtggtcg      600
cactttagcc agtcaggggt gtatggttac accacactca ataatatggg taccctgtat      660
ttcaggcacg tgaacaactc gaccatcggg ccttacacca gtgcagttag gatatatttc      720
aagccaaagc acgtcaaagc gtgggtgcca cgaccgccac ggttgtgcga ttacaaacac      780
aaaaagaacg tagacttac tcccacaggt gtgaccacaa ctagagacaa gataaccttg      840
gacaagggga ctcacgtgcc gagcgtatgg aacaca                                876
```

```
<210> 70
<211> 876
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 70
aatgaccccg aaggtgcact taataaagca gtgggcaggg tagctgatac tatagctagt       60
gggcccgtca atacagagca aattcctgca ttgacagcag tggagacagg gcatacatct      120
caagtggtac ctagtgacac aatgcaaacc cgacacgtgg tcaacttcca tactagatca      180
gagtcatcgt tacagaactt catggggaga gcggcatgtg tatatatcgc ccactatgcc      240
acagaaaagg ctaatgatga tttggacaga tacactaact gggagatcac aactaggcag      300
gtggcacagt tgaggcgcaa gttggagatg tttacgtata tgagatttga cctcgagatt      360
acattcgtaa tcaccagctc ccagcgtact tccaacaggt atgcgtcaga ctccccccca      420
ttaacacatc aaataatgta cgtgccgccg gggggtccaa ttcccaaggg ttatgaagac      480
tttgcctggc agacgtccac caacccaagt gtgttttgga ccgaaggtaa cgcccctcct      540
aggatgtcaa taccattcat gagcgttggc aacgcatatt gtaacttta tgatggatgg      600
tcccatttca gtcagagcgg tgtgtacggg tacactacat tgaacaacat ggggcgctta      660
tattttagac atgtaaacaa atcaacagga tacccagtaa atagtgtcgc ccgcgtctat      720
```

```
ttcaagccca agcatgtgaa ggcatgggta cctcgcgcgc cacgcttatg tccatatttg      780
tatgctaaaa atgtcaactt tgatgtgcaa ggcgtgaccg agtcccgggg taagatcact      840
ctcgaccgtt cgactcacaa ccccgtgtta accact                                876
```

```
<210> 71
<211> 876
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 71
aatgaccctg aaggtgcgct caacaaggcg gtgggcagag tggctgatac aatagccagt       60
gggcccgtca acactgagca aattcccgca ttgacagcag tggaaacagg gcacacatct      120
caagtagtac ctagtgatac aatgcaaact cgacacgtgg tcaacttcca caccagatca      180
gaatcatcgt tggagaactt catgggaaga gcagcgtgtg tgtatatcgc tcattatgct      240
acagagaagg ctaatgatga tttagacaga tacaccaact gggaggtcac aaccaggcag      300
gtagcacagt tgaggcgtaa actggagatg ttcacgtaca tgaggtttga cctcgagatc      360
acatttgtaa tcaccagctc ccagcgcact tcaaccaagt atgcgtcaga ttcccccccca      420
ctaacacacc agataatgta tgtaccgccg gggggcccga tccccaaggg ttatgaagat      480
tttgcctggc agacgtccac caacccaagt gtattttgga cggaaggtaa cgcccccccct      540
aggatgtcga taccattcat gagcgttggt aacgcatact gcaacttta cgacggatgg       600
tcccatttca gccagagcgg tgtgtacggg tacactacat tgaacaacat ggggcacttg      660
tatttcagac atgtaaacaa atcaactgca tacccagtta acagtgttgc ccgcgtctac      720
ttcaagccca agcacgtaaa ggcttgggtg cctcgcgcgc cacgcttatg tccatatttg      780
tatgcaaaaa atgtcaattt tgatgtacaa ggtgtgaccg agtctcgggg aaaaatcact      840
cttgatcgat cgactcacaa ccctgtgtca accacg                                876
```

```
<210> 72
<211> 877
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 72
aacgaccccg aacatgcgtt aaacaacgcc attggtagag tggcagatac gatcgccagt       60
gggccggtga actcggaacg catacctgca ctaaccgcag tggagacagg acacacgtct      120
caagtggtgc caagcgacac catgcaaaca aggcacgtag tcaacatgca tacaagatcc      180
gaatccacca tcgaaaattt catgggaagg gctgcttgtg tatacattgc gcaatacgcc      240
actgataagg ccagtgatga tctggacagg tacaccagct gggagatcac tacgagacag      300
gttgcgcaat tgaggagaaa gctggagctg tttacataca tgaggtatga cttagaagtt      360
accttgtcca ttaccagttc ccagcgcact tcgactacat atgcatcaga ctccccgcca      420
ttgacccacc aaattatgta tgtgcctccc gggggcccta ttcccatagg acacgaagac      480
ttcgcctggc agacttcaac aaacccagt gtcttttgga ctgaaggaaa tgccccacca       540
cgtatgtcca taccattcat gagtgtgggc aatgcctact gcaatttta cgatgggtgg       600
tcacatttta accagagtgg ggtgtatgga tacactacac taaacaacat gggtcgctta      660
tatttcaggc atgtaaacag atctactgcc tacccagtta atagtgttgc acgtgtttac      720
tttaaaccca aacacgtcaa agcctgggtc ccacgagcac cacgattgtg cccatacttg      780
tatgctaaga acgtgaactt taatgtgcaa ggtgtgactg actcccgaga caagataacc      840
gtagaccgaa ccaaccatgt acgtatgcgc accacag                               877
```

```
<210> 73
<211> 876
<212> DNA
```

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 73
aacgaccccg aacacgtgtt aaacaatgcc gttggcagag tggcagatac aatcgccagc   60
gggccggtga actcggaacg cgtacctgca ctaactgcag tggagacagg gcatacgtct   120
caagtggtgc caagcgatac tatgcaaaca agacacgtag tcaacatgca cacaagatct   180
gaatccacta tcgaaaattt catgggaagg gctgcttgtg tatacatcgc acaatacgct   240
actgacaaag ccagtgacga tttggatagg tacaccagct gggaaatcac cacgagacag   300
gttgcgcaat tgaggagaaa gttggaaatg ttcacataca tgaggtatga cctggaagtc   360
acctttgtta tcaccagttc ccagcgcacc tcgactacat atgcatcaga ttccccacca   420
ttgactcatc agatcatgta cgtgcctccc ggggggcccca ttcctatagg atacgaggac   480
ttcgcctggc aaacatcgac taaccctagt gtcttttgga ctgaaggaaa tgccccacca   540
cgcatgtcca ttccatttat gagtgtgggc aatgcctact gcaattttta cgatgggtgg   600
tcacacttta gccagagtgg ggtgtacgga tacactacac taaataatat gggtcgtctg   660
tatttcaggc atgtaaacaa atctactgcg tacccggtta atagtgttgc acgtatttac   720
ttcaaacccа aacatgttaa agcctgggtc ccgcgagcac cacgactgtg cccatatttg   780
tatgcaagga acgtgaactt taatgtgcaa ggtgtgactg actcccgaga aaagataacc   840
atagaccgaa ccaaccatgt gcccatgcgt aacaca   876

<210> 74
<211> 876
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 74
ggggacacgg aacatgcagt tgagtcagct atctccaggg tagcagatac cattagctca   60
ggtcctagta acactgttgc tataccagcg ctcaccgcgg cagaaacggg ccacacatcg   120
caagtcaccc ccagcgacaa tcttcagacg cgccatgtta agaactatca ctcccgctct   180
gagtcaacta ttgaaaactt cctgtgtaaa tccgcgtgtg tgcatattgc gtcatacaac   240
gcatacggtg atgttggatc agacagtaga tatgatagtt gggagatcaa catcagggaa   300
atggtgcagt taaggaggaa gtgcgaaatg ttcacctatc tcagatttga catggaggtg   360
acatttgtca tcactagcaa gcaagatcaa gggacttcgc tatcacaaga catgccagtg   420
ctaacacatc agatcatgta cgtgccgcca ggcggatccg tgcccactag cgtccagagc   480
tacgcatggc aaacatccac caacccgagc gtgttttgga cagagggcaa tgcccctgct   540
agaatgtcca tcccattcat tagcataggg aatgcataca gcagcttcta cgacgggtgg   600
tcacatttca cccaacaagg tggctatggc tataatacac tgaacaagat gggtaagttg   660
tttgtaaggc atgtgaataa agaaacacca acccatgtga cgagcacgat acgtgtatat   720
tttaaaccaa agcatgttag agcgtgggtg ccaaggccac ctagattgtg cccgtacatc   780
aataaagcgg actgtaactt cgctgttaca ccactcacca aacagcggtt aggaatcaac   840
gatgtcccgc ggcccagcca cacattacat actcat   876

<210> 75
<211> 875
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

```
<400> 75
aacgaccccg caaccgctat tgaaggagca gtccggcgag tggcggacac gatccagagc      60
ggaccgagca attcggagcg ggttccagcg ttaacggccg ttgagacagg tcacacagca     120
caggttaccc cgagtgatac aatgcaaact agacatgtac acaacttcca caccagatcg     180
gagtctagca tcgagaactt cctcagtaga gcagcttgtg tgtacatagg gaaatatagt     240
agcaatgcaa caacacaaga tgaacaatac atgtcatgga caattaatac cagacagatg     300
gtgcagctga gacgcaaatt cgaaatgttc acctacctac gcttcgacgt agaagtcact     360
tttataataa catcgcacca agatcaaggg acacagttca accaggatgc gcccgtaatg     420
tgccaccaaa tcatgtatgt gccacctggt ggcccggtgc ctaagagtgt tgatgacttc     480
acatggcaaa cctctactaa ccctagtgtc ttttggtcag aaggcaatgc accaccgaga     540
atgaccattc cattcattag tatagggaac gcctacagca gcttttatga tggctggtca     600
cacttctctc aaaatggggt ttacgggttt aatgcactca ataacatggg taaactgtat     660
gtgagacaag tgaacctaaa agccccctatg ccagtcagca gtacagttag gatctatttc     720
aaacccaagc atatcaaagc ttgggtaccc agaccaccgc gtctatgtaa gtacctgaag     780
tctgggagtg tcaatttga gcccactgat ttgacagaaa aacggaaatc cagaaagtac     840
atcccaaaaa ctttcagacc agatgtgaga accat                                875

<210> 76
<211> 843
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 76
ggtgatgtgc atgatgcagt tgtgggtgcg atgtcgcgcg tcgctgatac agtagcaagt      60
ggccctgcaa actctgagag cgtgcctgct ctcactgcgg tagaaactgg acacacgtca     120
caggtgacac caagtgatac aatgcagacc agacacgtac acaacttcca cacacggtcc     180
gaatcgtcaa tcgagaactt cttaagccgc tctgcatgtg tctattatgc aacgtacaaa     240
acaacagcca gcagacccga agaccaattc gttaggtggt ccatttcata ccgccaggtg     300
gcccaactgc gcaggaaaat ggaaatgttc acctacctgc gctacgatgt ggaggtcact     360
tttgtgatta caagttctca ggacccatcg accaacgtaa gccaggatgc tcctgtactc     420
acacatcagt taatgtacgt accccccggg ggtccagtgc ccaaaaattc aagagactat     480
gcatggcaaa catccaccaa cccgagtgtg ttctggaccg aggggaacgc accaccaagg     540
atatccatcc cctttatcag tgtgggcaac gcatacagtt gctttttatga tggatggtcc     600
cactactcac agacgggggt gtatggttac aacaccttaa acgacatggg ccaattattt     660
gtcaggcacg tgaatgaggc aagcccgggt gcggtgtcaa gtgtagttag gatttacttc     720
aaacccaaac atgtgaaggc atgggtcccg agaccaccac ggttgtgcca atatgttaac     780
gcagcaacgg tgaacttcac tcctgaaggg gtcactaagg cacgtactga tctcatgaca     840
aca                                                                   843

<210> 77
<211> 915
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 77
ggaatagaag aaactattga cacagtgatc accaacgctt tacaactgtc tcagcccaaa      60
ccgcagaaac aactcactgc tcaatccacc gcctcatcca gcggagtcaa ttcacaagaa     120
gtgccagcat tgactgctgt gggagacggga gcttctggtc aagccatacc cagcgacgtg     180
attgagacca gacatgtcgt caattacaaa actagatctg aatcaacccct tgagtcattc     240
tttggtagat cagcatgcgt aaccatactg gaagtagaga acttcaatgc cactaccgaa     300
tcggacaaga aaaagcaatt caccacctgg ccaatcacat acaccaacac agtccagttg     360
```

31

```
cgcaggaaat tggaattctt tacatactcc agatttgatc tggaaatgac ttttgtcata    420
actgagaggt accacacaag taatacagga catgctagaa atcaagtgta ccaaataatg    480
tacataccac cgggtgcgcc aaggcccaca gcacgggatg attacacctg gcaaagttca    540
tccaatccat cagtgtttta cacatatggt agcgcgcctc ccagaatgtc tatcccatat    600
gttggcattg ccaatgcata ctcacacttt tatgacgggt ttgcccgagt tcccctgaaa    660
gatgatacaa ctgactccgg tgacactttt tatggattgg tcaccatcaa tgactttgga    720
acattggctg tgagggtggt gaatgagttc aaccctgcaa ggataacatc aaaggtcaga    780
gtttatatga agcccaaaca tgtgaggtgt tggtgtccta ggccaccgcg cgcagtgccc    840
tatcgtggtg aaggggttga tttcaaacaa gattcaatca cgccaataac agcagtcacc    900
aatattaata ccttc                                                    915
```

<210> 78
<211> 936
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
     synthetic construct

<400> 78
```
tcaaaccact tacatggagc agaggcagcc tatcaggtgg agagtatcat caaaacagca     60
actgatactg tgaagagtga gattaacgcc gaacttggtg tggtccctag tctaaatgca    120
gttgaaactg gtgcaacttc caacactgaa ccagaagaag ccatacaaac tcgcacagta    180
ataaatcagc atggtgtgtc ggagacgtta gtggagaatt ttcttggtag ggcagcccta    240
gtgtcaaaga aaagttttga atacaagaat catgcctcat ccagcgcagg gacacacaaa    300
aacttttta aatggacaat taatactaag tcttttgtcc agttaagaag aaagctggaa    360
ttattcacat accttaggtt tgatgctgaa atcaccatac tcacaactgt ggcagtaaat    420
ggtaataatg acagcacata catgggtctc cctgacttga cactccaagc aatgtttgta    480
ccaactggtg ctcttactcc aaaggagcag gattcatttc attggcaatc aggcagtaat    540
gctagtgtgt tctttaaaat ttctgatccc ccagctagaa tgactatacc ttttatgtgc    600
atcaactcag catattcagt tttttatgat ggctttgctg gatttgagaa aaatggtcta    660
tatggaataa acccagctga cactattggc aacttgtgtg tcagaatagt gaatgaacat    720
caaccagttg gttttacagt gaccgttagg gtttacatga agcctaaaca tataaaagca    780
tgggctccac gaccaccgcg aaccatgcca tacatgagca ttgctaatgc aaattacaaa    840
ggtagagata cagcaccaaa cacacttaat gccataattg gtaatagagc gagtgtcaca    900
actatgcctc acaacatagt aaccaccggt ccgggt                             936
```

<210> 79
<211> 861
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
     synthetic construct

<400> 79
```
aatgaccagc acaatggggc gatcgttgcc aacacaacag ctagcggacc ttctaattcg     60
gaaagcatac cggcacttac tgcggctgag actggccaca catcgcaggt tgtccctagc    120
gacaccatcc agacaagaca tgtgaaaaac taccactcgc gttcagagtc caccatagag    180
aacttcctgt gtagatctgc ctgtgtgtac tacaccacgt acaacactca gggcgagcaa    240
gcacatgata aatacgcaag ttggccaatc acgactagaa aagttgccca actgcgcagg    300
aagctggagt tctttaccta cctgcggttt gatctcgaga tcacgttcgt gatcacgagc    360
gcccagatca catccacgaa ccaaaaccag gatgccccag tactcacaca tcaggtgatg    420
tatgtacccc caggggggt ggtaccgcgc agtgtggatg actatagttg gcagacttcc    480
accaatccca gcatcttctg gacagaaggg aacgcacctc ctcgtatgtc aataccattc    540
attagtgtgg gcaacgccta cagcagcttt tacgacgggt ggtcacactt tgaacaaacc    600
ggggtatatg gattcaatac ccttaataat atggggactt tgtacgccag gcacgttaac    660
```

```
ggtgctagtc ccgggccagt caagagcacc attaggatat atatgaaacc taaacatgtg    720
aaagcgtgga tacctaggcc cccacggttg tgcgactatg tgaaatctgg caacgtcaac    780
tttgaaccaa aaggagtcac cgagagcaga ccatctataa agttagaaaa gacctcaagt    840
gggcacaggc tgacaaccca c                                             861
```

```
<210> 80
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<400> 80
Met Tyr Val Pro Pro Gly Gly
 1               5

<210> 81
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<221> VARIANT
<222> (0)...(0)
<223> Xaa = any amino acid

<400> 81
Met Tyr Xaa Pro Xaa Gly Ala
 1               5

<210> 82
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct


<221> VARIANT
<222> (0)...(0)
<223> Xaa = any amino acid

<400> 82
Phe Gly Xaa Gln Ser Gly Ala
 1               5

<210> 83
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
```

<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> VARIANT
<222> (0)...(0)
<223> Xaa = any amino acid

<400> 83
Thr Ala Xaa Glu Thr Gly His
 1   5

<210> 84
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> VARIANT
<222> (0)...(0)
<223> Xaa = any amino acid

<400> 84
Thr Ala Val Glu Thr Gly Xaa
 1   5

<210> 85
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 85
Gln Ala Ala Glu Thr Gly Ala
 1   5

<210> 86
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<221> VARIANT
<222> (0)...(0)
<223> Xaa = any amino acid

<400> 86
Met Xaa Xaa Pro Pro Gly Xaa
 1   5

<210> 87
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 87
Met Tyr Val Pro Pro Gly
 1   5

<210> 88
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 88
Met Phe Val Pro Pro Gly
 1   5

<210> 89
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; Note =
      synthetic construct

<400> 89
Met Tyr Val Pro Thr Gly
 1   5